

PATENT SPECIFICATION

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(54) CONTAINER DISPENSERS

(71) We, LINGNER & FISCHER GMBH., formerly UHU-Werk H.U.M. Fischer G.M.B.H., a German Company of 7580 Bühl/Baden, German Federal Republic, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to container-dispensers for materials in solid stick forms.

A previous successful container-dispenser for materials in solid stick form may be defined as comprising in combination: (a) a tubular body; (b) an internally-threaded follower arranged within the body and having a slidable but non-rotatable engagement therewith; (c) an externally-threaded stem coaxial with the body also arranged within the body and having co-operative engagement with the follower; and (d) a rotatable knob arrangement partly within and partly outside the body at the base of the body, said knob arrangement being secured non-rotatably to the stem, the stem and the knob acting as a unit having a rotatable non-sliding connection between the tubular wall and the said unit towards the lower end thereof. Rotation of the knob arrangement causes the follower to slide within the body. The material to be dispensed is placed in stick form on the follower and thus rotation of the knob arrangement causes the stick material to be presented from within the tube.

Such container-dispensers have been found to have the disadvantage that moisture may leak between the inside of the container and the exterior if the rotatable knob arrangement does not completely fill the base of the tubular body as frequently occurs when the parts are of plastics materials. Thus the stick material may lose some of its essential moisture and deteriorate in character.

It has now been found that a sealing member can advantageously be incorporated into the knob arrangement in such a manner as to prevent leakage of moisture from the contents of the container-dispenser to the exterior. It has been found that a suitable seal-

ing arrangement for this purpose is provided by a plastics projection forming an interference fit between the container wall and the knob arrangement.

Accordingly, the invention provides a container-dispenser of the type hereinbefore defined, characterised in that it further comprises the feature of a deformable sealing member projecting outwardly from that part of the knob arrangement within the tubular body to form an interference fit with the inner wall thereof.

By the term "interference fit" is meant that the diameter of the sealing member is marginally greater than the internal diameter of the tubular body so that insertion of the knob arrangement into the tubular body results in the slight deformation of the sealing member which presses against the inner wall of the body.

A particular embodiment of the invention will now be described with reference to the accompanying drawings in which:

Fig. 1 is a longitudinal section taken through the container-dispenser;

Fig. 2 is a plan of the container-dispenser;

Fig. 3 is an enlargement of the central part shown in fig. 1.

The container dispenser has an upper tubular body portion (1) and a lower hollow rotatable knob arrangement (2).

The body portion (1) which is of circular cross section is open at its upper end (3) and closed towards its lower end (4) by the knob arrangement.

Optionally, the upper end of the side wall of the body portion is reduced in thickness and externally threaded (5) to receive the interior threads of a removable cover (not shown), which when applied has its outer wall flush with the outer wall of the body portion. Alternatively the cover can be a simple push fit on the open end (3) of the body portion.

The knob arrangement (2) which extends for some way into the chamber (6) of the body portion is of circular cross section and has a short side wall (7) of slightly smaller external diameter than the internal diameter of side walls of the body portion (1).

The top wall (8) of the knob arrangement (1) is of greater diameter than the side wall (7) so that it projects beyond the side wall (7) to form an upper deformable protuberance (9). A lower protuberance (10) projects from the side wall (7) below the upper protuberance (9) so that an indentation (11) is formed into which fits an annular ridge (12) extending inwardly from the lower end of the side wall of the body portion. The protuberance (10) is of slightly greater thickness than the protuberance (9) so that the knob arrangement can be inserted into the tube by slight pressure which causes the upper protuberance (9) but not the protuberance (10), to jump over the ridge (11).

From the centre of the top wall (8) of the knob arrangement (2) projects an externally-threaded stem (13). The stem (13) projects into the chamber (6) and terminates a short distance from the upper end thereof.

A follower (14) comprising a hollow cup shaped member having an exterior diameter slightly less than the internal diameter of the body portion (1) has an interior screw thread which co-operates with the threaded stem (13).

The outer wall of the follower has indentations (15) into which fit the longitudinal, narrow guide ribs (16) which protrude from the inside wall of the body portions (1). The co-operation of the indentations (15) with the guide ribs (16) prevent rotation of the follower (14) when the knob arrangement (2) and its stem (13) are rotated.

From the side wall (7) of the knob arrangement (2) at a point between the lower protuberance (10) and the point opposite the lower end of the body portion projects a sealing member (17) which is integrally-formed with the knob arrangement.

The sealing member is thin and flexible and when in an undeformed state has a slightly greater diameter than the inner diameter of the body portion (1). The free end of the sealing member is thus forced slightly downwards when the knob arrangement is forced into the body portion. The sealing member accordingly forms an interference fit with the interior of the body portion and thereby provides an adequate moisture seal.

The parts of the container-dispenser may each be moulded from appropriate plastics material which is chosen according to the type of rigidity required for the various parts. In particular the sealing member must be sufficiently flexible for it to be deformed into the desired interference fit.

The improved container-dispenser of the invention may be used for the presentation of cosmetic or pharmaceutical compositions in stick form for tropical application, for example for lipsticks or solid deodorant, insect-repellant or perfume materials. However, the invention is particularly suitable for use with adhesive compositions in stick form such as those described in Specification No. 1365147 (German Auslegeschrift 2,054,503).

WHAT WE CLAIM IS:—

1. A container-dispenser for materials in solid stick form comprising in combination

(a) a tubular body;

(b) an internally-threaded follower arranged within the body and having a slidable but non-rotatable engagement therewith;

(c) an externally-threaded stem co-axial with the body also arranged within the body and having co-operative engagement with the follower; and

(d) a rotatable knob arrangement partly within and partly outside the body at the base of the body, said knob arrangement being secured non-rotatably to the stem, the stem and the knob acting as a unit having a rotatable non-sliding connection between the tubular wall and the said unit towards the lower end thereof characterised in that there is provided a deformable sealing member projecting outwardly from that part of the knob arrangement within the tubular body to form an interference fit with the inner wall thereof.

2. A container-dispenser according to claim 1 characterised in that the sealing member is integrally formed with the knob arrangement.

3. A container-dispenser as claimed in claim 1 or 2 characterised in that it contains an adhesive composition in stick form.

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COMPLETE SPECIFICATION

2 SHEETS

*This drawing is a reproduction of
the Original on a reduced scale*

Sheet 1

Fig. 1.

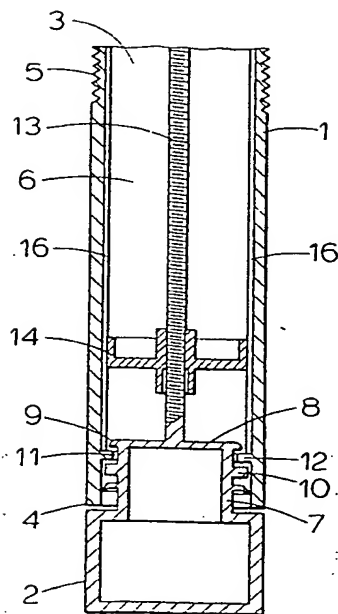


Fig. 2.

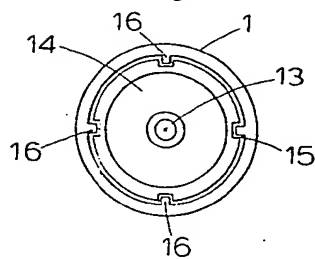


Fig. 3

